XIV.—*Some Account of the Volcanic Group of Milo, Anti-Milo, Kimolo, and Polino.* By Lieut. E. M. Leycester, R.N., F.R.G.S.

Communicated by Admiral Beaufort.

Read May 10, 1852.

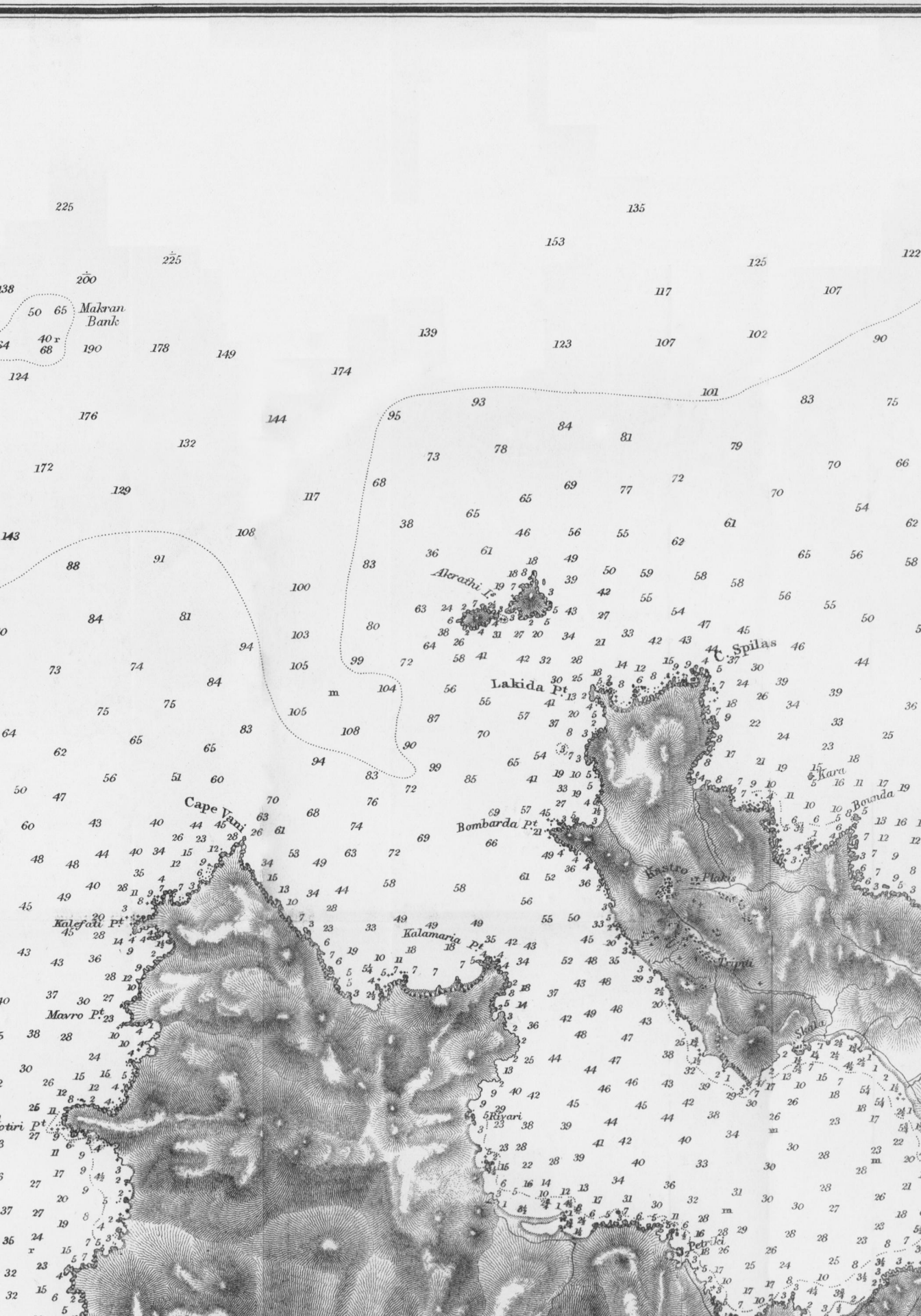
Milo.—This island, situated in 36° 45′ N. lat. and 24° 26′ E. long., is familiar to most mariners who have traversed the Ægean Sea—and what naval officer in the course of his career has not been acquainted with a Milo pilot, or, to avoid the fury of a strong N.E. wind, has not sought shelter within its ample port? To accompany the excellent survey by Lord John Browne under the direction of Capt. Graves, it may not be inopportune to collect a few notices relating to it.

The harbour of Milo bears about E.N.E. true from Cape St. Angelo, in the Morea (the ancient Malea), and is distant from it about 60 miles. On its N.E. coast are the outlying islands of Kimolo, Polino, and some dangerous rocks and shoals. On the N. it has the Akrathes islands; on the N.W. Anti-Milo, with its steep sides and towering peak, 2500 feet above sea-level; and off the South Cape, Psali Partchel, distant less than 1 mile, lies Prassu Nisi. Finally, to the S.E., off Cape Stiletto, distant $3\frac{1}{16}$ miles, are situated the rocks called Ktania.

If we suppose that we are steering towards Milo from the Gulf of Athens, the wind strong at N.E., or mal-tems, we are carried rapidly past the isles of St. George d'Arbora and Anti-Milo, now capped with fleecy clouds, and approach the shores of Milo: the white surge dashing violently against its black basaltic cliffs shows a strange contrast; and from an agitated sea, we find ourselves securely anchored on the eastern side of a calm and placid basin, of great expanse: the course has been about S.E.b.S. ½ S. (true), and the distance about 90 miles. The entrance to the harbour is open to the N.W., and as we approach near to it the strata of the shores show out in many colours. On the port hand is a remarkable crag; the summit is covered with a scanty herbage, the sides are white, varied with streaks of chocolate, red and yellow running into it; more to the N.E. the shores are of white tufa, in places lofty and rugged, then low and regular; and those more directly opposite to Kimolo or Argentiera are almost black, like some parts of Santorin.

Within the port, from the anchorage, near the little village at the Scala, now peopled by a colony of hardy mountaineers from the fastnesses of Sfakia in Crete, the voyager naturally casts his eyes around, and, if it be spring, the prospect is not unpleasing, the country being covered with corn, and in places with vines. A great part of it to the S.E. is a plain, in the centre of which stands


ANTIMILO
Zigraro Pt.
Hd.
Ichlidi Pt.
Vlikadi Pt.
Makran Bank
Cape Vani
Kalefati Pt.
Mavro Pt.
Akrotiri Pt.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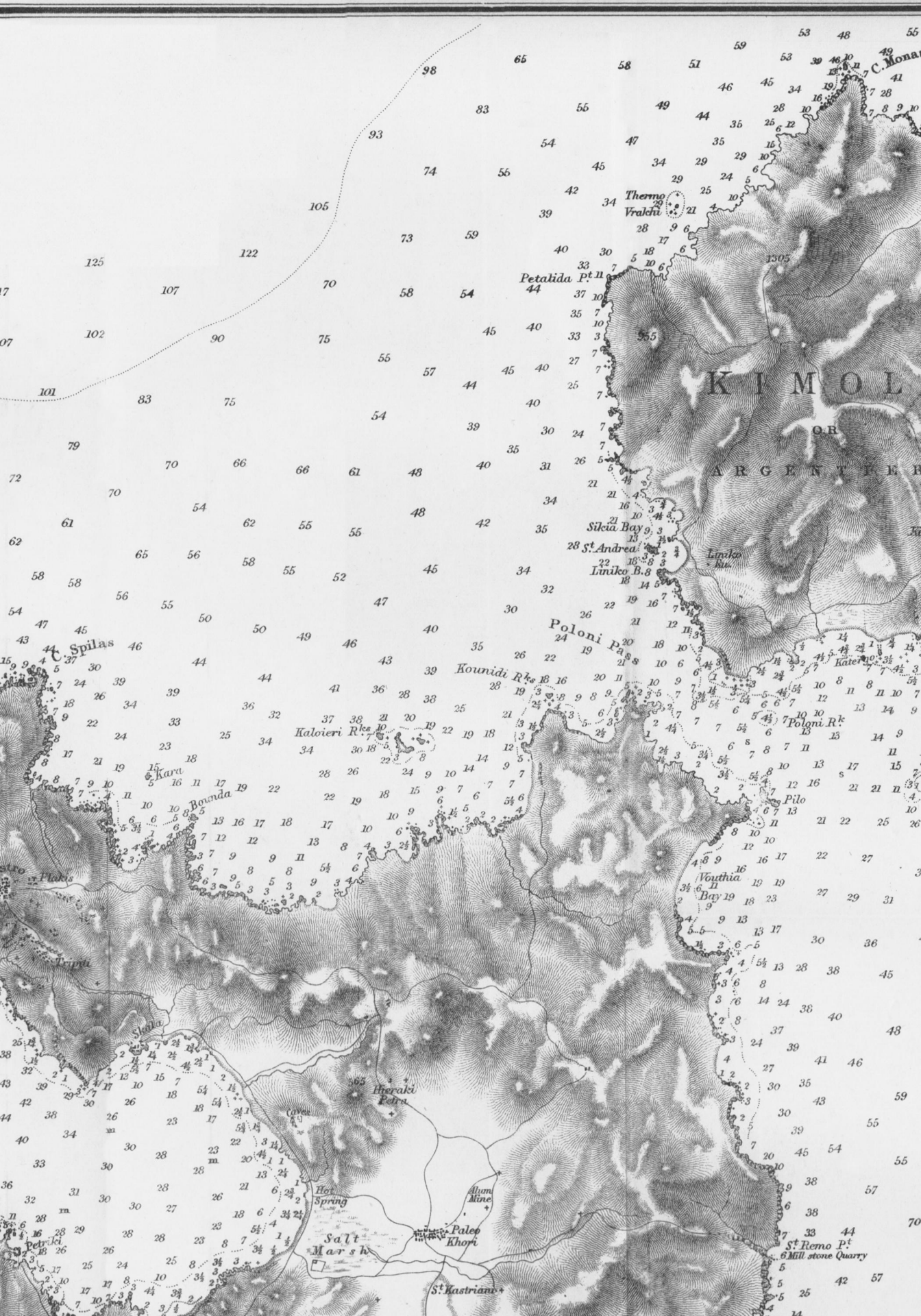
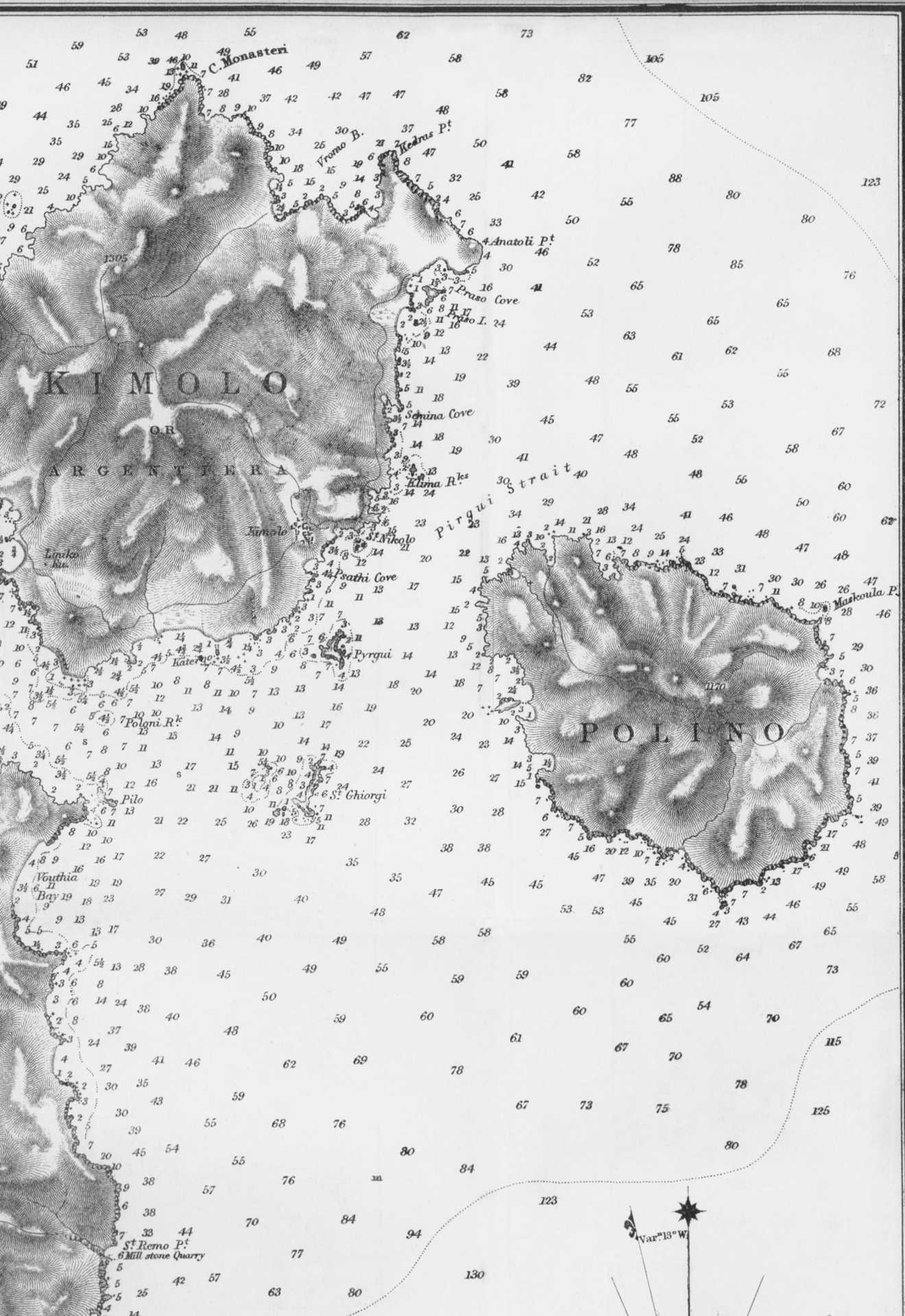
Akrathi L.
Lakida Pt
C. Spilas
Kara
Bounda
Cape Vani
Bombarda Pt
Kastro
Plaka
Kalamaria Pt
Kalefati Pt
Mavro Pt
Riyari
Petriki


C. Monaci
Thermo
Vrakhi
Petalida Pt.
1305
KIMOL
O.R
ARGENTIE
Sikia Bay
St. Andrea
Liniko B.
Liniko Rks.
Poloni Pass
Poloni Rk
Kounidi Rks
Kaloieri Rks
C. Spilas
Kara
Bounda
Plakis
Tripa
Skala
Vouthia Bay
Pilo
Kater
Hieraki Petra
Hot Spring
Alum Mine
Paleo Khori
Salt Marsh
St. Kastriano
St. Remo Pt
Mill stone Quarry
Petriki


C. Monasteri
Vromo B.
Kedras Pt
Anatoli Pt
Praso Cove
Praso I.
KIMOLO
OR
ARGENTIERA
Semina Cove
Klima Rks
Pirgui Strait
Kimolo
St Nikolo
Psathi Cove
Pyrgui
Kateno
Poloni Rk
Pilo
St Ghiorgi
Vouthia Bay
St Remo Pt
6 Mill stone Quarry
Linaka Rks
Maskoula Pt
POLINO
1170
1305
Var.n 13° W.

ARCHIPELAGO

THE ISLANDS OF

MILO

ANTI-MILO, KIMOLO AND POLINO

SURVEYED BY

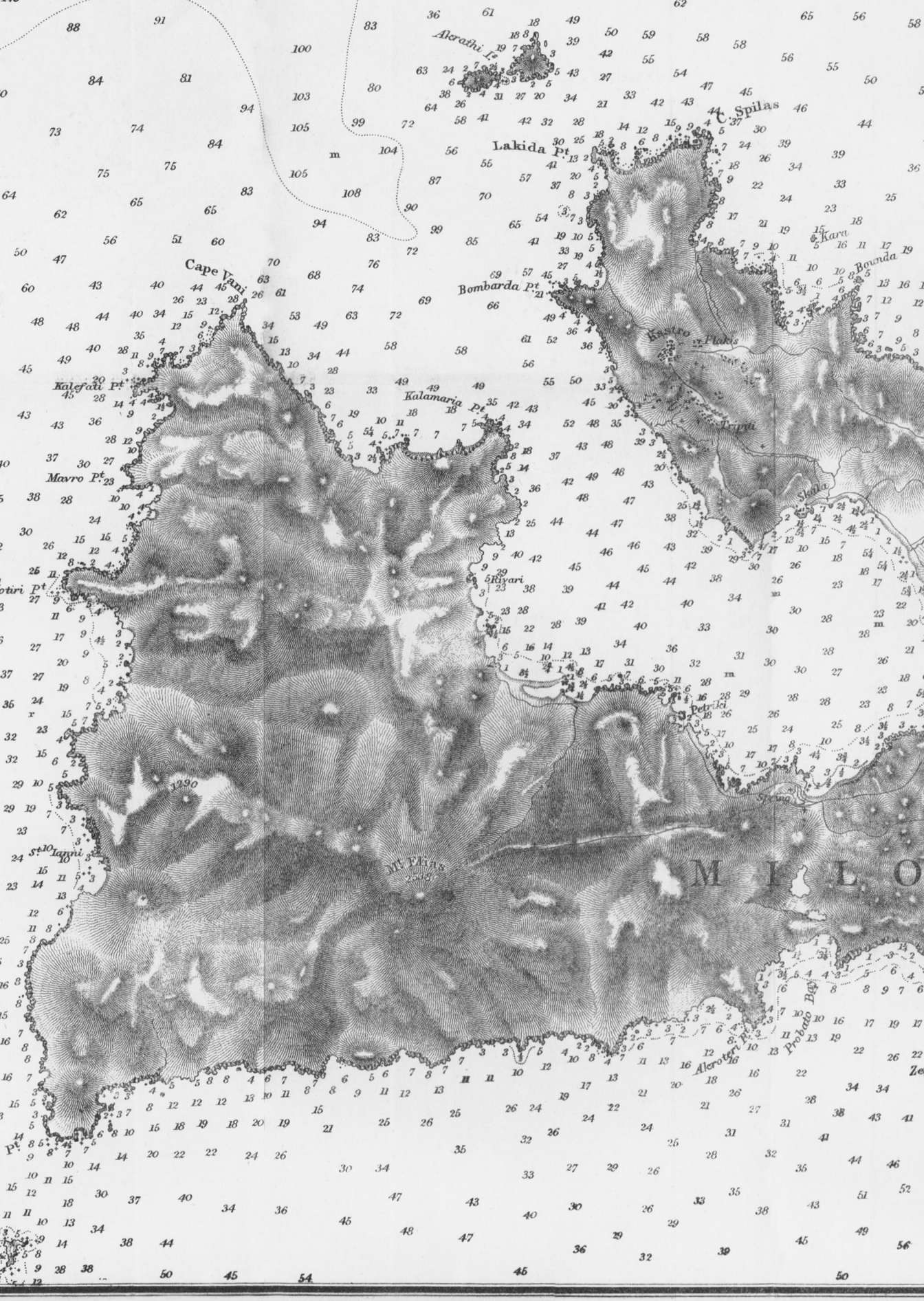
THE RIGHT HON^BLE LORD JOHN BROWNE

Under the direction of

CAPTAIN THOMAS GRAVES

H.M.S. VOLAGE

1849.


Alcrathi Is
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Cape Vani
Bombarda Pt
Kastro
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Kalamaria Pt
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Mavro Pt
Skala
Riyari
Petriki
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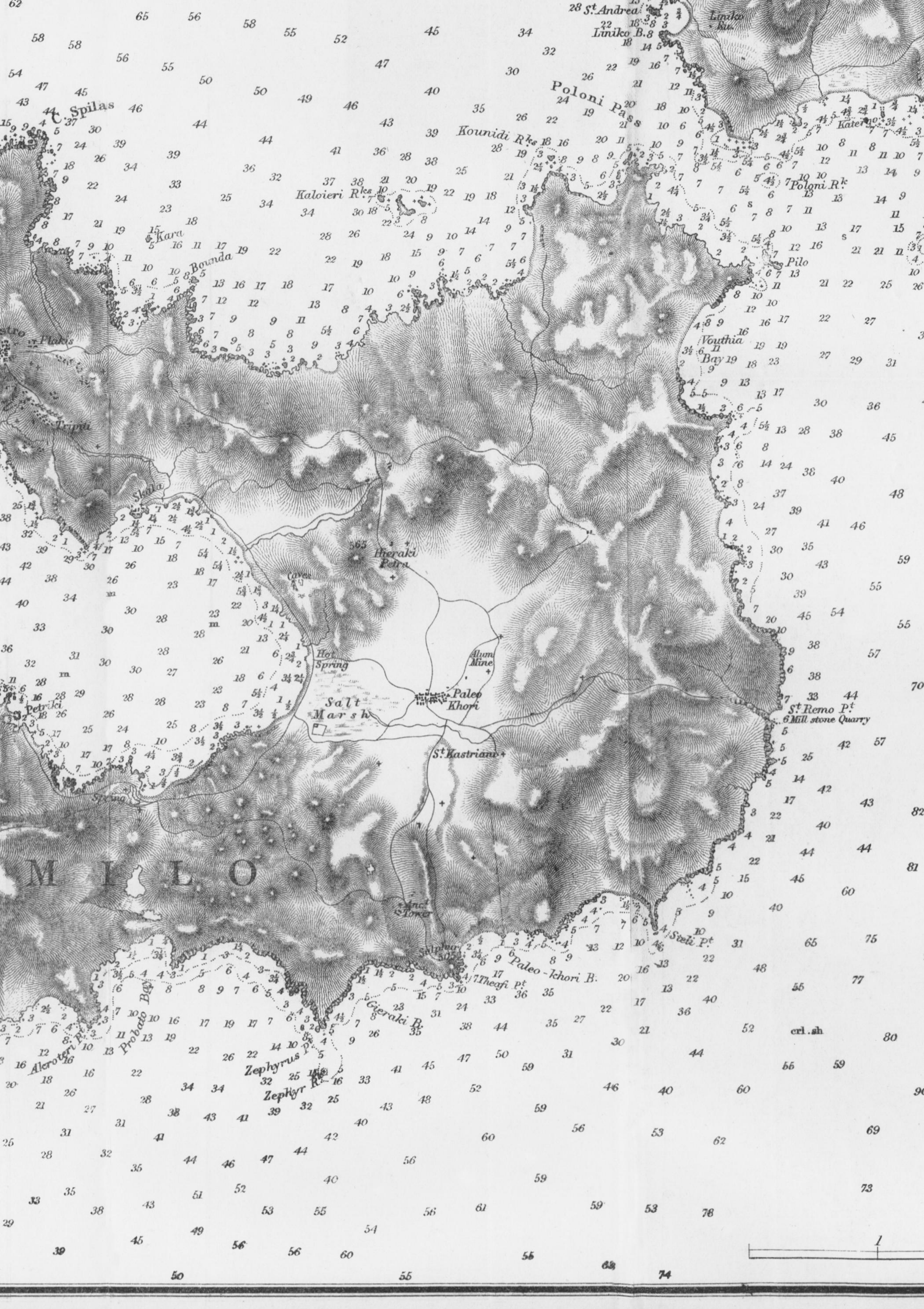
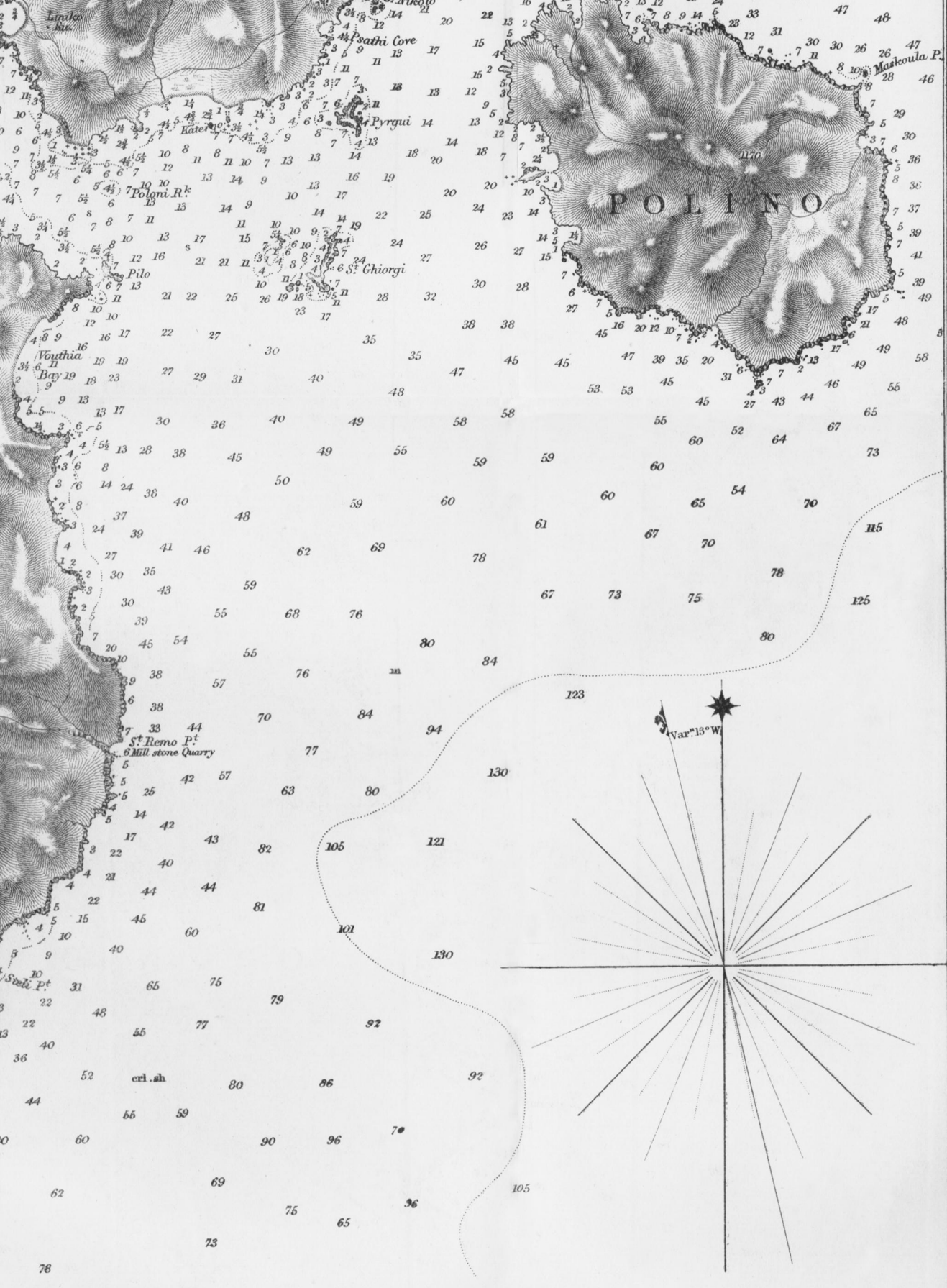
Mt. Elias
M I L O



C. Spilas
Kara
Bounda
Kaloieri R.ks
Kounidi R.ks
Poloni Pass
St. Andrea
Liniko B.
Poloni R.k
Pilo
Vouthia Bay
Tripiti
Skala
Petriki
Hieraki Petra
Caves
Hot Spring
Salt Marsh
Alum Mine
Paleo Khori
St. Kastriani
St. Remo Pt.
Mill stone Quarry
Spring
M I L O
Anct. Tower
Steli Pt.
Paleo-khori B.
Theafi Pt.
Gieraki B.
Zephyrus Pt.
Zephyr R.k
Probato Bay
crl.sh



Transferred by J. & C. Walker.

the mediæval town, which in the time of Tournefort numbered 5000 souls; in that of Olivier, a century later, not more than forty families; and now, in 1849, only a few ragged wretches are scattered among its ample ruins, consisting of houses of the middle ages and of the present time.

To the S. the country assumes a more hilly and rugged aspect. To the S.W. we see the chain of mountains, of which St. Elias is the principal, its peak being 2545 feet above the sea level. The geographical features of the coast, as described by Lord John Browne, are as follow:—

April 28, 1849.—Commencing from Cape Vani, the western cape on entering the harbour, the land trends to the S.S.W. in a jagged broken form, and contains three bays, as far as Cape Psali Partchel, the S.W. extreme of Milo. These three bays are called collectively Triathes, but the name is more generally applied to the central bay, the only one in which a vessel can anchor. Cape Akroteri, the N. point of this bay, is $2\frac{1}{2}$ miles from Cape Vani; off it the rocks extend to $\frac{1}{10}$ of a mile, some under water and some awash. In this bay vessels may lie in N.E. or easterly winds, but it is quite open to the W. The bottom is fine sand, depth 8 fathoms $\frac{1}{4}$ of a mile off shore; its propinquity, however, to the port of Milo is a strong reason for not making use of it. Separated from it by a broad rocky point is the bay of St. John, "Hagios Ioannes," a rocky open bay, with a foul bottom and no anchorage. Tournefort speaks of iron being found near St. John's, the spot being called St. Jean de Fer; but I could hear no account of it. The monastery of St. John's stands on a little hill in the centre of the ravine at the head of this bay; S. of it, scarce $\frac{1}{3}$ of a mile, is a hill 1400 feet high.

From this bay Cape Psali Partchel (as it is pronounced) is 2 miles distant to the S., and Cape Vani 5 miles to the N. The cliffs of this coast are generally of a greyish black.

To the S.S.W. of Cape Psali Partchel, and distant 1 mile, is situate Prassu Nisi, a rocky island 1 mile in circumference: to the S. of it the rocks are visible above water to the distance of near $\frac{1}{10}$ of a mile, and from them a bank extends to the S.S.W. one mile off shore, gradually deepening to 20 fathoms. There are rocks all round the isle to the distance of $\frac{1}{10}$ of a mile. Between it and the cape there is a clear passage, having not less than 10 fathoms in it: there are a few rocks off the cape, but they are close in shore.

Close to the S.W. corner of Milo there is a place called the Porto di Malta, which is said to have been a great place for pirates. This little nook, which is to the E. of Cape Psali Partchel, has a small island near it, between which and the mainland there is a passage, on both sides of which are numerous bollards

cut in the rock, intended for boats to make fast to: it is a very concealed place, and boats might pull past without perceiving it. It is also well sheltered from the summer breezes. There is a narrow, cliffy, deep little ravine, the water from which falls into the sea in this little bay, to the W. of the small point. The sun scarcely ever shines into this ravine, in which there is a deep hole, always full of rain-water summer and winter. There are some stunted firs, wild olive, and other trees near; it is the best place for fire-wood on the whole island. Flocks of goats and sheep are constantly near for the benefit of the water. The shepherds never mentioned anything like a cave near, that would in any way identify itself with the grotto of the corsairs mentioned by Tournefort.

From thence the land trends to the eastward, in which direction it runs pretty straight, with trifling indentations, to Cape Akroteri ("a common name among Greeks for a high rocky headland"), a distance of nearly 5 miles. Along this coast the land is steep and rocky, rising into precipitous hills, interspersed by deep ravines: it is totally unfit for cultivation, and only affords pasturage for a few mountain goats and sheep; fire-wood can be cut in the ravines, but there is no water. In strong northerly winds the squalls come down off these hills with great violence.

Cape Akroteri is the western point of Provato Bay, a good anchorage in northerly winds, but open from E.S.E. to W.S.W.; it has a clean bottom of fine sand, and depth varying from 18 to 7 fathoms close off Provato, a red point in its centre: it possesses also the additional advantage of being only 2 hours' walk from the Scala within the port of Milo; to the nearest part of the harbour it is only 1 mile across. Provato Bay may be known by the red appearance of both Provato and Akroteri, which are bluffs, but not high.

Off Cape Phiriplaka, the eastern point of the bay, is a dangerous rock ¼ mile from the shore, with only 1½ fathoms on it; between it and the cape there are 6 fathoms. An Austrian vessel was wrecked on this rock in 1847. From this cape the land turns a little to the northward, forming a small bay, surrounded by precipitous cliffs, terminating in Cape Kalamos, a high bluff cape, and the most western point of Palæo Khori Bay. This bay is 1 mile wide, and at the E. end of it there is good anchorage in northerly winds; the bottom is fine sand, and depth 10 fathoms ¼ mile off shore. Cape Stiletto, a narrow black point, above 100 feet high, is the E. point of this bay: 2¾ miles off this point, in an E.S.E. direction, lie the Ktania rocks, two dangerous rocks, about 20 feet high, but having deep water all about them; at a distance they have the appearance of two vessels close together. From Cape

Stiletto the land turns gradually round to the northward, rising into high precipitous hills, broken by deep ravines; close to Cape Rema, the eastern extreme of Milo, there is a small sandy bay at the mouth of a deep ravine, from whence a very valuable kind of millstone is procured. From thence, following the coast to the N., after passing a cliff of considerable height, the land slopes much; perpendicular cliffs are succeeded by sandy bays and undulating hills, well cultivated. The great defect of these islands is the scarcity of good water, the few existing wells being brackish. The colour of the eastern coast is generally of a brick-red, mixed more or less with white. $2\frac{3}{10}$ miles to the N. of Cape Rema there is a large shingly bay, called Vouthia; but although it is well sheltered, there is no anchorage in it, the bottom being foul. At its northern extremity, and off the N.E. extreme of Milo, lies Pilo Nisi, a small islet, close to the mainland. Polino lies due E. of it $3\frac{3}{10}$ miles, and Kimolo stretches along to the northward, the nearest part being $\frac{3}{4}$ of a mile distant; and Cape Polonia bears W. by N. compass 1 mile. Close to the S. end of Pilo Nisi on the main isle, at the foot of some cliffs, heat is emitted through the fissures of the rocks, and some sulphur may also be seen about.

Between Pilo Nisi and Nipolino lies the small island of St. Giorgio, with some smaller islets. Off its S.W. extreme, and distant from Pilo Nisi one mile, $\frac{1}{3}$ of a mile off St. Giorgio, and due W. from its centre, there is a reef of rocks with only 1 fathom on them. These rocks narrow the passage between Pilo Nisi and St. Giorgio to $\frac{3}{4}$ of a mile, the water here being 20 fathoms, and gradually decreasing as you approach Kimolo. Having passed Pilo Nisi, there is good anchorage in Kimolo, Aliki, or Polonia roads, as the different parts of it are called by the natives. They are sheltered from all winds except from the S. to the E.S.E., and may be recommended as a good anchorage for vessels going to the northward, having an advantage over the port of Milo, as they are less difficult to get out of with the wind from that quarter; and having three passages, a vessel has free egress whichever way the wind may be. The first is the Polonia passage; the second, that between Kimolo and Nipolino, keeping clear of the Katergo Rocks; and the third to the southward of Nipolino, either to the eastward or westward of St. Giorgio. Tournefort infers from the etymology of the word that a temple of Apollo once stood on Polonia. The bottom is fine sand, and depth varying from 6 to 15 fathoms. On the E. end of Aliki, a sandy bay on the S. side of Kimolo, there is a small island, Katergo: close in-shore to the E. of it lie the Katergo rocks, $\frac{2}{10}$ of a mile from Katergo, and the same distance from the Kimolo shore. They are awash, and break with the slightest swell. Katergo has other contiguous rocks, but they are close to the shores.

Cape Ammonia is the S. point of Kimolo, and is only ½ mile distant from Cape Polonia, the northern point of Milo, from which the passage takes its name. Off Cape Ammonia some rocks are visible above water, and outside of them are others sunken; the extreme of them, however, being only $\frac{1}{10}$ of a mile off that cape. Keeping clear of these rocks, the Polonia passage is free from all danger, the deepest water being on the Milo shore; and vessels should keep well over on it. To the W. of Polonia there is a long reef of rocks close in-shore, and above water; there is deep water close to them. Passing westward from thence $\frac{6}{10}$ of a mile, Kaloyeros isle is brought on the port-bow, a small bay intervening between it and Cape Polonia. It is a large conical-shaped rock, from whence the land trends inwards, or to the S., forming a large bay, rocky, and near 4 miles wide. It is quite open to the N., and has several little islets in it. The peninsula that separates it from the port of Milo is nowhere more than two miles across; and in one place little more than one mile as the crow flies. The shores generally are low; and towards the eastern part the land appears in a good state of cultivation. Towards the W. end of the bay the coast is higher, precipitous, and jagged. Kaloyeros isle or rock is black in colour, and blunt at top, formed of columnar trachyte. The main land opposite is the same. Cape Chidathe is the N.W. extreme of this peninsula; and off it, distant about $\frac{6}{10}$ of a mile, are two small cliffy islets, having a clear passage between them and the cape more than ½ a mile wide, 34 fathoms the deepest water. Between these islands, which are close together, there is no passage.

In answer to a question by letter, Lord Browne tells me that the cape inside of Kaloyeros rock is black until you go a short distance to the southward, on the W. side, when it changes to a particularly well defined line of white, the two forming a remarkable contrast to each other. He adds, "I have not seen the Giant's Causeway, and cannot say whether the cliff we talk of is like it or not; but it certainly is very remarkable. I do not think the word *columnar* appropriate. It presents the appearance of a number of black elongated oblongs, or rhomboidal-shaped rocks, pressed together by some tremendous force, and then hove up by a convulsion of nature. They are slanting, not perpendicular. It has a very imposing appearance."

Kimolo.—The island of Kimolo (the Cimolus of the Latin and Greek writers), or, as it is called in the old charts, Argentiera, lies to the N.E. of Milo. It is of an irregular round shape, and between 14 and 15 miles in circumference. The inhabitants amount to 1100 in number, who all reside in a town on the S.E. side of the island. A considerable portion of the land in the neighbourhood of the town, and on the S. side of the island, is cultivated; but the

whole of the northern half is rocky, mountainous, and sterile. The highest peak of Kimolo is 1305 feet above the level of the sea. The remains of an old building, apparently Venetian, are still to be seen on its summit. Like Milo, it has no water except the rain that is caught in cisterns; the wells are all brackish. The inhabitants are dirty in the extreme; and there are few places in the archipelago so offensive as their habitations.

The only harbour in the island is on the E. side, opposite Nipolino. It is a small creek, sheltered from all winds, called Agios Minas; it has 3 fathoms water; and vessels of more than 250 tons burthen moor in it, head and stern, with their anchors laid out to the entrance, the S.E. The only trade of the island is stone for building, which is of so superior a quality that it is exported to Constantinople. Ancient tombs have been found on the S.W. coast of Kimolo.

To the S. of this port there are some rocky islands ¼ of a mile off shore, with rocks between them and the point abreast. There are also some other creeks on the E. side of the island, where caiques take refuge; and the small vessels of the country sometimes anchor off the S E. end of Kimolo, between it and the island of Stathi, nearer to the latter than the former. The anchorage is, however, very small, only ¼ of a mile across, and open to the N.E. It is not to be recommended. The shore of Kimolo is, for the most part, black.

Polino.—Polino, or Nipolino, generally pronounced by the natives "Pō-li-vō," is a precipitous and barren island, lying S.E. of Kimolo, and distant from it about 1 nautic mile. The greatest length is from N.W. to S.E., and, with the exception of about 4 acres on the W. side, it is totally uncultivated. We found but one shepherd upon it, tending a few sheep and goats. Between it and Kimolo there is a clear passage, fully ¾ of a mile wide in the narrowest part. It contains no port, but has a small bay on the W. side, with an island in it, St. Manoli, where there is a good anchorage in northerly winds for small vessels. The N.E. and S.E. sides of Polino are surrounded by high cliffs with deep water close to the shores. The cliffs of this island are also generally black; but on the S.E. side white, with a little red. The highest peak is 1168 feet.

Thus far my information has been supplied by Lord John Browne on the coast-line of Milo, its adjacent isles, rocks, and shoals.

Anti-Milo.—This island, which lies about 5½ miles N.W. of Cape Vani, is little more than 6 miles in circuit. The highest point is 2330 feet; and the shores are for the most part precipitous. Lord John Browne told me that when he was last on it he was informed that on the summit there is a large artificial tank

cut out of the solid rock, which the Meliots declare to be a work of ancient times; for what use they know not, whether for animals or man: most likely the former, as the isle is too steep and bare to be inhabited, except by shepherds. He also added, that it possesses good grazing for sheep and goats. The N. end is a very steep cliff, and has an imposing appearance. Many surmises have arisen among voyagers as to the nature of the animals now wild on Anti-Milo; some have suggested that the isle was a preserve for deer in the time of the dukes of the archipelago. Few people seem to have landed on its steep rocky shores. About 3½ miles E. by N. true, off Cape Zigraro, the N.E. extremity, there is a rock having 40 fathoms least water on it, though the average depth around is about 150 fathoms.

According to Lord John Browne's survey, the coast-line of Milo is a circuit of about 35 miles, from Cape Chidathe on the eastern side of the harbour's mouth to Cape Vani or Varni on the western side. This will give a good allowance for indentations; the harbour, measuring also from those points, will give about 15 miles more, making a total coast line of 50 miles. Tournefort makes Milo 60 miles in circuit, and Olivier the same; and more recently, in the 'French Scientific Expedition to the Morea' (vol. ii.), the same extent of coast is given.

Properly speaking, the harbour does not commence before we arrive off Cape Kalamaria, which is immediately opposite the ruins of ancient Melos, the former being on the western shore, the latter on the E.; and the voyager steering in may see the cliffs under the site pierced with many tombs, for the most part inaccessible except by boats.

From Cape Kalamaria to the opposite shore it is 1 mile across; and the port from these points is full 10 miles round. The anchorage for a small frigate like the Volage is in 7 fathoms about $\frac{3}{10}$ of a mile S.E. of the small village of the Scala. Larger ships should lie farther S. in 15 to 18 fathoms, and ½ mile off shore. I have seen vessels in heavy squalls drive to the S. end of the bay; but they were country craft, with probably bad ground-tackle. The harbour has been called Protothalassa by some people; but Lord Browne tells me that he never heard it called so; and during our visit we never heard it called anything except "the Port."

I have since received the following remarks from Lord John Browne, which are rules for approaching the harbour of Milo by night:—

Sailing Directions.—Supposing the voyager approaches it from the N.W., a good guide is the *lowest* part of the island, which lies to the left of the high peak of Elias, and for which a vessel should steer direct, until seeing the islands on the N. side of the entrance and the Crow's Nest; but if approaching from the S. of Anti-Milo,

this rule will not apply, as then care must be taken to avoid the western point on entering, which is a red bluff, about 200 feet high, which would appear comparatively low by night; also for taking further directions for entering from the S., take the compass course into the harbour off the chart; and a vessel would always be safe in keeping clear of the shore until she brought the lowest land to that bearing, when, by steering direct for that part of the island, she could not go wrong, as the coast is bold, and the islands and Crow's Nest are very remarkable; but on entering keep close to the Crow's Nest shore. On a moonlight night the entrance can be seen quite well some distance off. The best holding ground in the harbour is about ½ mile to the S.E. of the Scala, between it and the marsh, but nearer to the former, as it is sheltered from the W. and N.W. winds, which throw a swell upon the coast, by the marsh; *nearer* the Scala the ground, though equally good, is more cut up.

I have observed that the port of Milo is open to the N.W., and that it affords excellent shelter from all winds, particularly the mal-tems, which blows with so much violence in July and August.

On May 25th I proceeded to the summit of Elias, in order to get a general view of the country. The atmosphere being clear, there was no impediment to the use of the theodolite, and the necessary angles were taken. In the distant prospect we counted thirty-three islands of the Grecian archipelago, Peloponnesus and Attica comprising a part of the view. Crete, to the S., with its noble chain of mountains, bounded our view on that side; Ida, and the higher part of Sfakia, or the White Mountains of Strabo (p. 475, ed. Casaub.), being partially covered with snow.

Mount Elias, though insignificant as a mountain, is nevertheless high for a small island like Milo, and from its summit the neighbouring peak of Anti-Milo appears in close contiguity, but a little lower. The isle of Milo itself stretches out at one's feet in panoramic view, its harbour almost bisecting it in a N.W. and S.E. direction, the distance across from Provato Bay to the port of Milo being only a mile. On the summit of Elias is a small church dedicated to that saint; indeed there is scarcely a high peak in the Archipelago which does not bear this name. The western half of Milo is chiefly calcareous: it is also very mountainous and precipitous, susceptible of little cultivation, with no habitations for man, with the exception of a convent on the eastern slopes of the mountain, and a few huts. The eastern half comprehends a large and fertile plain with the ruins of a town built in the middle ages; also many vineyards, corn-fields, and three or four villages, at and around the Kastro, or Crow's Nest, known to the French as Sifours. Pliny (iv. 12) calls Milo perfectly round, and Tournefort follows him, but a glance at the map will disprove that assertion, for the

W., S., and E. shores are more straight than round. From the Elias of Milo can be seen the mount Elias of Santorin, bearing about E.S.E., and distant about 57 miles. The two islands are not very dissimilar in structure, inasmuch as they are in a great measure formed of volcanic materials, though Santorin has given birth to craters of elevation and the former has not; at least there is no record of them.

On our descent from Elias we visited the convent of Santa Marina on its eastern slopes; it is now almost a ruin. There are around it many orange, olive, cypress, and arbutus-trees; and there are two very good tanks or wells of water. It is the lowest of the two establishments on this side of the mountain; the upper one is used as a storehouse, but was formerly a monastery; even in the time of Olivier it was flourishing. I could not discover the cause of its decay. About ½ a mile to the E. of it is a large vein of gypsum on the side of the mountain, from whence quantities of that article are extracted and exported to Athens: they use it for clearing their wines, and in some countries it is used for manure. It is mentioned by Pliny (xxxv. 6). We returned to the ship by the road round the port over a country at first rugged and volcanic, plentifully strewed with obsidian, and then more flat at the foot of the plain.

Only one town in Milo is mentioned by ancient writers (Ptolemy, Pliny). The ruins are manifest on the eastern shores as one enters the harbour immediately opposite Cape Kalamaria, and about 1 mile S.S.E. of Cape Bombarda. Olivier was the first who described this site, and it has since been described by Colonel Leake and others, and more recently by Professor Ross. As I assisted Mr. Wilkinson in measuring the wall and catacombs, it may not be out of place if I say a few words on the subject. Landing at the little village at the Scala (now colonized by a band of Sfakians who, preferring the rule of Otho to that of Mustapha Pacha in their native isle, have come over to reside in Milo), we pass up the hill in a N.W. direction towards the Kastro or Crow's Nest, which is perched on a pinnacle. Our road is over white trachyte conglomerate, plentifully strewed with obsidian; on our right is a deep hollow or circular basin among the hills, having a flat bottom, and the appearance of an exhausted or extinct crater, the lips marked by volcanic tufa, with pieces of obsidian imbedded in it; on each side of the road are small caverns, and here and there tombs cut in the volcanic conglomerate. In 40 minutes we enter the village of Tripiti, and, after passing through it towards the Kastro and beyond a few houses called Limni, our attention is attracted by the trace of ancient walls on the left of our path, composed of roughly fitted polygons. Striking out of the road we follow their direction up a rugged hill on the left, having a jagged

surface, with here and there traces of the foundations of ancient buildings. This hill, which is called Bereadi, is precipitous on almost every side, and was probably the Acropolis of the city. From this height we see nearly the whole of the ancient site, its elevation from the bay being about 800 feet. To the S.E., distant about $\frac{2}{10}$ of a mile, is the above-mentioned village of Tripiti, and in the interval a deep glen, the sides of which are pierced with innumerable tombs. This gorge runs from N.N.E. to S.S.W., and meets another of the same kind nearer the sea, which stretches from E. to W.; below their junction are some gardens and water in a small valley close to the sea, which is called Klima. The former of these glens forms the eastern boundary of the city.

To the S.W. Mount Elias appears in full view on the opposite side of the Melian bay, the waters of which are close under the site of the city. Melos, like Delphi, and many other Greek cities, was for the greater part built terrace-fashion on and around the slopes of a hill which is still called Apollon, and is situated S.W. of what I assume to be the Acropolis. Upon its summit are the remains of an old church called Hagios Elias; and as there are many fragments of marble columns on and around it, I should suppose it was the original site of a temple, being a fine spot for that purpose.

Between this hill and the rocky cliff below the Acropolis is a table-land, now converted into gardens and corn-fields. We found there some fragments of columns, cornices, entablatures, &c., principally of the Corinthian and Ionic orders; also to the S., below this elevated plateau, built into the side of the hill, and having a S.W. aspect, are the remains of a beautiful little Greek theatre, which was cleared away by order of the King of Bavaria in 1836. This elegant structure seems never to have been finished: it has no signs of wear, and the marks of the chisel are all sharp; the soil removed from within was all volcanic matter, and we may attribute the pure whiteness of its marbles to their having been for so many centuries shielded from exposure. It has nine incomplete concentric circles, and six complete; also it never was intended to have more than one series of seats, being but a small theatre: they are of the purest Parian marble, each block of which is marked with the letter β, for what reason I cannot divine, unless, as we mark government property with the broad arrow, the β is to denote Basileus. The diameter of the Κοῖλον, or cavea, is 88 feet, and, this being more than a semicircle, probably the building is a Greek work, the Roman theatres being exact semicircles.

There are large portions of an Ionic entablature and cornices lying within the theatre in an unfinished state, some of the ornamental parts of which have been lined out for the chisel, but not

Remains & Rui
of the
ANCIENT TOWN
MELO
(ΜΗΛΟΣ)

By Mr. G. R. Wilkinson

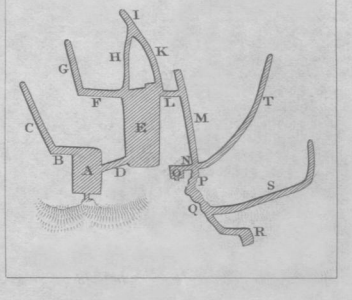
H.M.S.V. VOLAGE.

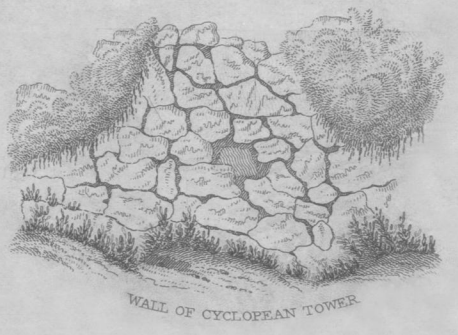
500
Scale

REFERENCE.

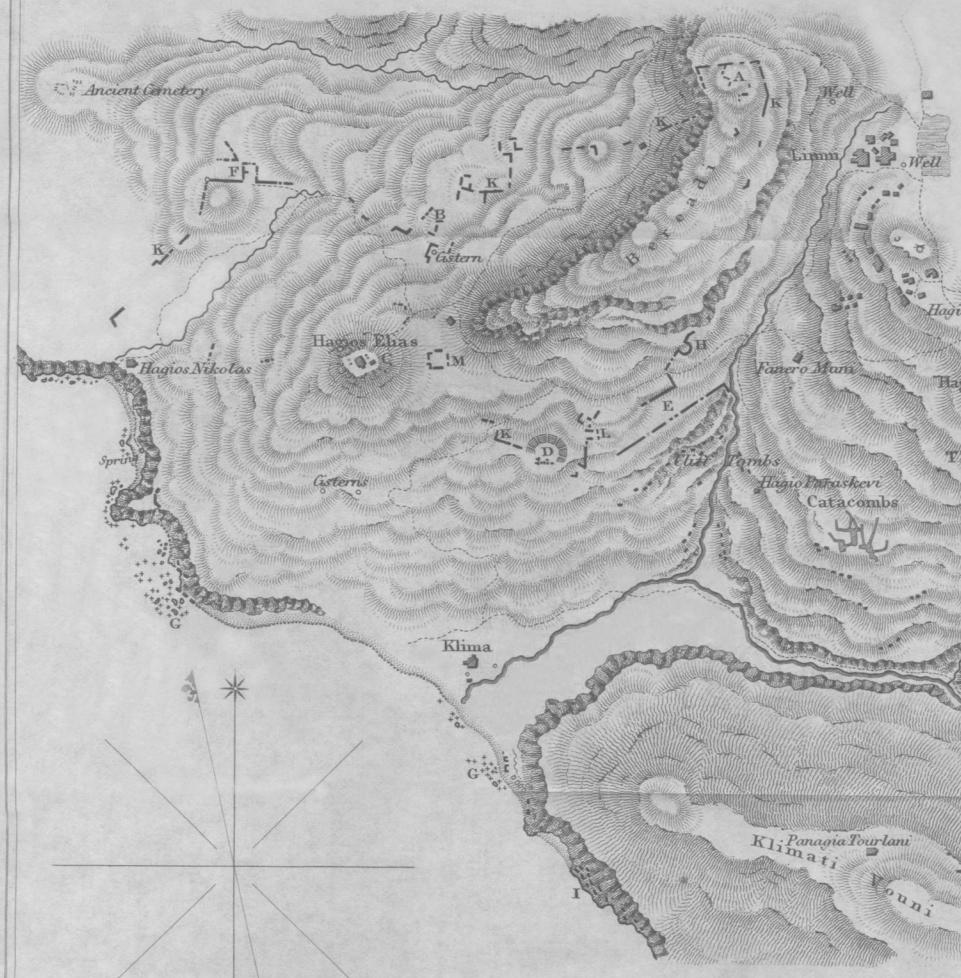
A *Acropolis*
B *Supposed site of Temple of*
C *Hill Apollo*
D *Theatre*
E *Supposed site of Temple of*
F *Cyclopean Tower*
G G *Ruins of Towers of Middle*
H *Round Tower*
I *Catacombs in face of Cliff*
K K K *Hellenic walls*
L *Gate*
M *Foundation of a large Building*

ENLARGED SKETCH OF THE CATACOMBS

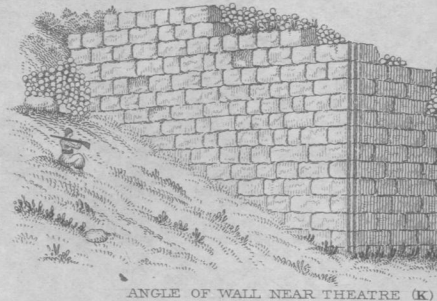




WALL OF CYCLOPEAN TOWER



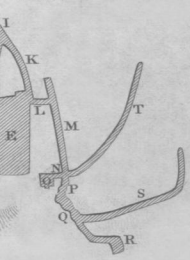
ROUND TOWER

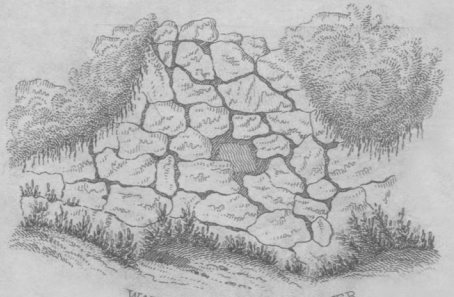


ANGLE OF WALL NEAR THEATRE (K)

Published for the Journal of the Royal Geographical Society, by John Murray, Albemarle Street, London, 1852.

D SKETCH OF THE
ATACOMBS





WALL OF CYCLOPEAN TOWER

Remains & Ruins
of the
ANCIENT TOWN OF
MELOS
(ΜΗΛΟΣ)

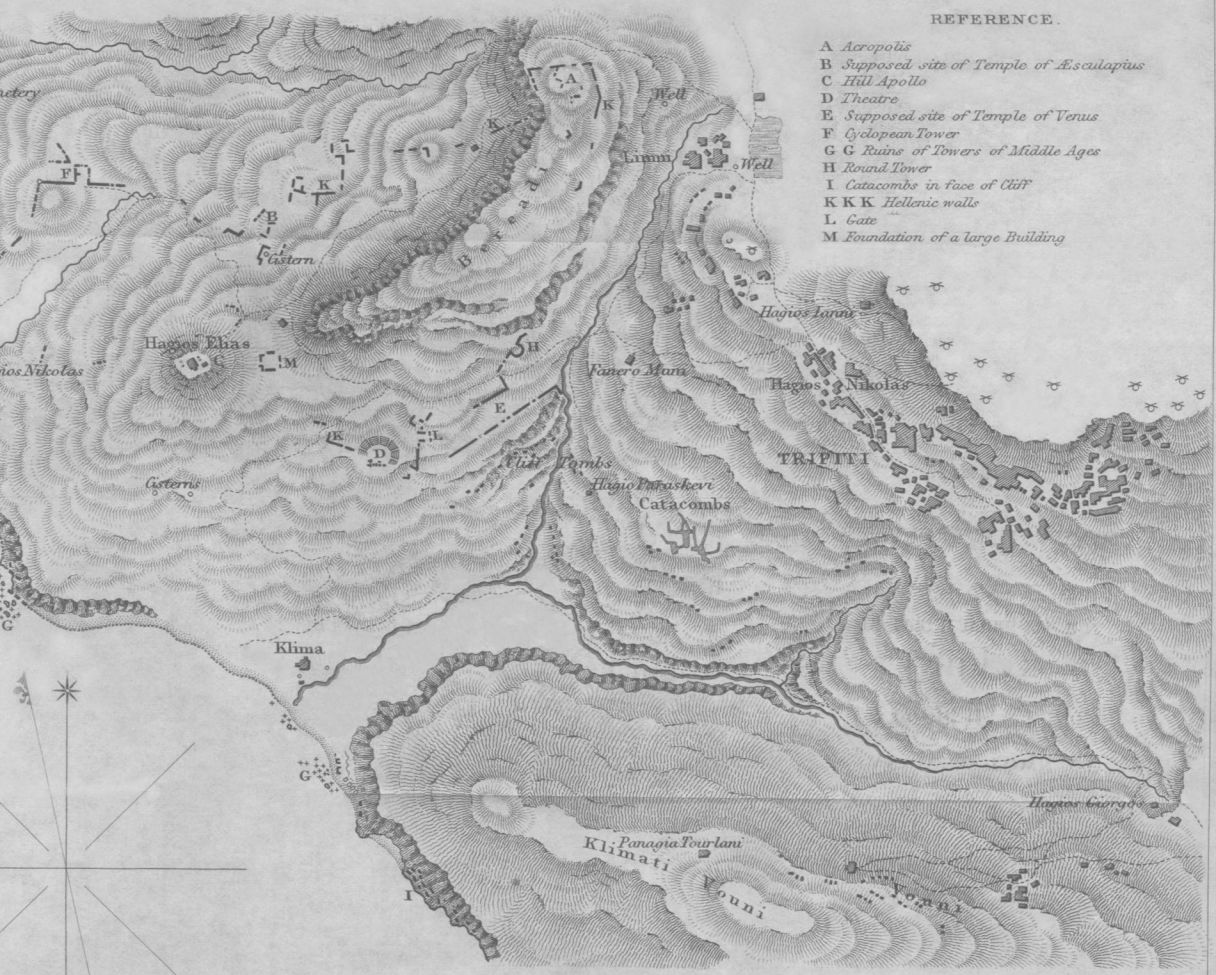
By Mr. G. R. Wilkinson, R.N.

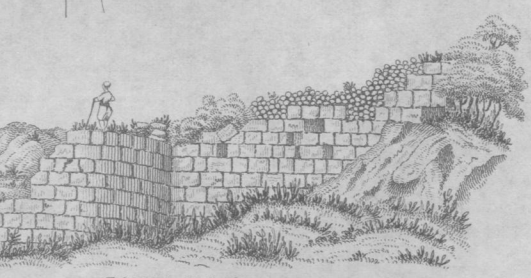
H.M.S.V. VOLAGE. 1848.

500 1000 Feet
Scale

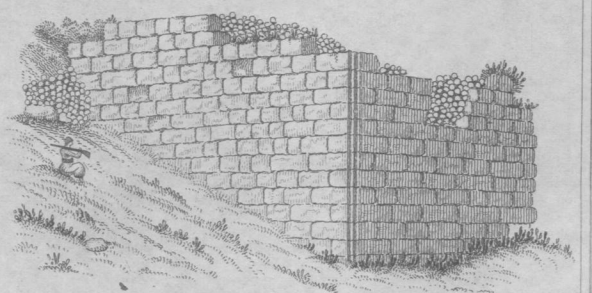
REFERENCE.

A *Acropolis*
B *Supposed site of Temple of Æsculapius*
C *Hill Apollo*
D *Theatre*
E *Supposed site of Temple of Venus*
F *Cyclopean Tower*
G G *Ruins of Towers of Middle Ages*
H *Round Tower*
I *Catacombs in face of Cliff*
K K K *Hellenic walls*
L *Gate*
M *Foundation of a large Building*





ROUND TOWER



ANGLE OF WALL NEAR THEATRE (K)

A. Findlay.

Published for the Journal of the Royal Geographical Society, by John Murray, Albemarle Street, London, 1852.

completed. We found that the site of the city was enclosed by about 6026 feet of wall, and the sea frontage might have comprised about 1500 feet more. The western wall is traceable from the cliffs on the sea-coast to the cliffs under the Acropolis: also on that side, with an exception here and there, where more modern repairs have replaced the old wall. It is of the Cyclopean species of masonry. We found the general width to be from 10 to 12 feet: the praires are generally of what I believe is termed the third species, or of regularly squared blocks. The drawing in the plan of the city, executed by Mr. Wilkinson, will sufficiently explain the different styles and ages of their structure. Perhaps the repairs may have been effected after the sack of Milo by the Athenians, as recorded by Thucydides. The western wall approaches the Acropolis, or heights above, in a zigzag form, having square towers of defence at its angles; some of the land without it has evidently been disturbed and overthrown by earthquakes. A short distance to the N. is an ancient place of sepulture, probably of the Roman period.

Near the Cyclopean tower, F in the plan, a fine statue of Æsculapius was found. Descending from the N.E. angle of the Acropolis, we trace the wall in a southerly direction, having in many places courses of the polygonal kind correctly joined, but rough on the surface. One hundred and fifty feet of it are seen in continuation from thence. Keeping in a S.W. direction, with here and there fragments of the wall, and the hill sloping to the sea, after an interval of 700 feet we arrive at a round tower, which the polygonal wall joins, although the tower itself is of regular masonry, built after the manner of those which are still to be seen at the Piræus of Athens, also at Platæa in Bœotia, and Eretria in Eubœa. This tower, which has many courses perfect, is 30 feet in diameter. A few paces S. of it, without the city wall but immediately beneath it, there is a regular platform E, on the edge of the ravine, above which it is supported by a gigantic wall of polygonal masonry, which in places is quite perfect and 20 feet high. This space is 450 feet long by 140 feet in width, and appears to have been the site of a temple, perhaps that of Venus, or some large public edifice. The statue of the famous Milo Venus, now in Paris, was found in this locality. The wall terminates 100 feet to the S.W. of this spot; that is, no more traces of it exist, though probably it ran down to the sea and joined the tower under the high cliffs of Klimati Vouno on the opposite side of the little valley before mentioned. On the plan there is a gateway marked L, apparently the place of ingress, from what I have assumed to be the site of the temple of Venus, into the city, and it takes one close to the little theatre. The greater part of the stone with which the city walls were constructed is of a dark colour, in places nearly black, showing symp-

toms of having been much exposed to the action of fire; in fact, many of the cliffs on the coast, such as Cape Mavro, Kaloyero isle, &c., are of the same colour. The wall marked K in the plan, a short distance W. of the theatre, is almost black. In many places within the city tesselated pavement may be detected by removing a little of the soil, particularly on the S.W. slopes of the hill Apollon. Coins of Melos are now and then found, but I was unable to obtain any on account of the exorbitant price demanded.

Perhaps there is nothing in Milo or in the Archipelago more curious than the vast extent of tombs and catacombs in the side of the mountain under the village of Tripiti, and also in the face of the sea cliffs opposite Cape Kalamaria. The most extensive set which Mr. Wilkinson and myself measured consist of many hundred feet of passages and chambers. These depositories have no doubt been prepared for this purpose at a period subsequent to the Christian era, as the inscriptions or epitaphs in red paint over the tombs sufficiently testify, being "Εν κυριῳ, or In the Lord." I send one, the most perfect that we found, which has been noticed by Professor Ross; for the translation of which I am indebted to my friend Mr. R. W. Hay, who accompanied me into these tombs the second time I visited them, in 1849, when on our passage to Cyprus in order to survey that island.

It was in 1847 that we measured the catacombs. Not knowing how far we had to penetrate, we provided ourselves with a clue, the end of which we fastened to the entrance, taking with us candles, matches, instruments, &c., with two seamen to assist. Descending a narrow passage, we entered by a small door into the first chamber, marked A in the plan: it is 40 feet in length, 15 in breadth, average height 5 feet 6 inches, with arched niches over sarcophagi on each side. Some of these latter were in pairs, as for man and wife, parent and child. From the N. end of this chamber we passed on to a passage going westward, marked B; it is 14 feet long, 10 broad, and 6 feet 6 inches high, and has the usual depositories along its sides. Turning again to the N., we entered another passage, C, 61 feet long, 6 feet 3 inches broad, and 5 feet 8 inches high; there being no continuation from this, we retraced our steps to the first or entrance-chamber A, and from its eastern side crawled on all fours through a narrow passage D, bearing easterly: it is a descent of about 5 feet to 13 feet, is only 3 feet wide, and in consequence of an accumulation of rubbish its average height is only 3 feet; it contains no tombs. Emerging from thence, we entered chamber E, 63 feet long, 15 feet 3 inches broad, and averaging 6 feet in height; it has single and double sarcophagi on all sides; also the floor of it, as in the others, has been turned to the same purpose, whereby no space is lost, and on its eastern

side is the tomb on which the above-mentioned inscription was found. From the N. end of chamber E we passed westward into passage F, 29 feet long, 6 feet broad, and 6 feet 6 inches high, also full of tombs; thence, turning N., we proceeded to the end of the chamber G, which has a slight inclination westerly. The length of this passage is about 40 feet, and it is narrow; at the end we came to a full stop, and retraced our steps to the large chamber E, and at its N. end got into another passage H, 42 feet 6 inches long, 2 feet 6 inches broad, and 3 feet 8 inches average height, but in some places it is so low that we were compelled to crawl some yards on our hands and knees, in consequence of the accumulation of rubbish. This led us northward into another passage I, which runs N.W., and from its junction with H is 18 feet long, 5 broad, and average height 4 feet 6 inches; it has a tomb at its extremity, as well as those at each side. Retracing our steps southward, we passed through another passage K, which forms a sort of fork with H, and brings us back to the N.E. angle of the chamber E, from whence we found passage L, 9 feet 6 inches long, 3 feet broad, and 3 feet high; it runs E. into a large passage M, entering which at its N. end we proceeded 117 feet S., breadth 6 feet 9 inches, height 3 feet 10 inches. After passing 79 feet of the 117, we turn to the W. into passage N, 3 feet high, 3 feet broad, running into a beautiful little tomb, nearly square, which, being stuccoed all over and painted black, I call the black tomb O; it is arched, and has sarcophagi at its N and W. sides; it is 9 feet square; the quantity of rubbish in it decreases its height to 4 feet 2 inches, and that only to the top of the arch. In the centre, at its S. side, is a marble doorway, which must formerly have opened on the side of the mountain. We took sketches of this door, and one of a niche over one of the sarcophagi, but we could not arrive at the hard floor of the apartment, although we grubbed with our hands to the depth of 5 feet at the doorway. Leaving this tomb by the same passage that we entered it, N, we travelled S. 38 feet in passage P, an irregular excavation 5 to 10 feet in breadth, the height varying from 4 to 10 feet; the soil was so loose that it threatened to bury us at every step. We crawled out of it to the S.E. through passage Q, 2 feet 6 inches broad, and 3 feet high (having no tombs), which conducted us to R, another irregular chamber, 16 feet long, 4 broad, 3 high, also without tombs; the volcanic earth above was very loose, rendering caution necessary not to disturb it, our backs touching it as we proceeded on our course. At its S. end we were stopped, and, returning to the junction of passages, P and Q, on our right hand we found another passage, which trended in a curve E.N.E. about 60 feet, and then took a turn to the N. 40 feet more; we called it chamber S. At its N. end we

came to a full stop; it is full of tombs on each hand, and we were troubled with numbers of bats flying against our candles. We retraced our steps to P, and struck into another passage immediately opposite the one which took us into the black tomb; we named this T; we found it 102 feet in length, taking a N.E. direction; the width of the entrance was 4 feet 6 inches, height 6 feet 10 inches, width at its end 3 feet 6 inches, height 3 feet; it was also full of sarcophagi. We returned from thence to chamber P, up chamber M, through passage L, into chamber E, through passage D, into chamber A, and from thence into the open air, not sorry to see the light of day after being three hours in the bowels of the earth. The thermometer within was 76°; without, in the shade, 68° (May 15th, 1847). These chambers and passages are near 800 feet in length, stretching to different points of the compass; they have been all despoiled, notwithstanding the curses and anathemas which the ancients invoked upon those who should desecrate a tomb; but the presence of golden bracelets, earrings, gems, &c., had such charms for modern spoilers as far to outweigh the terrors of a curse.

Many inscriptions and fresco paintings within have been destroyed apparently from a love of mischief. One tomb, probably that of a woman, has the semicircular arch over it painted with flowers upon a grey ground. It is the most perfect fresco of any within. We may judge from there being many hundred sarcophagi cut in these chambers alone, independently of many others on the side of the same hill, that ancient Melos was thickly peopled, even after the commencement of our era. I have heard of more than one dark deed of murder committed in these receptacles, where the knife has settled a quarrel over an antique gem. Some part of the site belongs to John Saramasko, a kind of antiquarian. The inhabitants call him Joanni Antico; a large marble sarcophagus just below the theatre is his property, in which it is his wish to be buried. We found some cisterns about the site and basements of ancient buildings. In Milo, as in all other ancient towns with few exceptions, the dead were carried without the city walls.

We found few inscriptions in Milo, although I hunted diligently after them; I have copied out those which I have, and they accompany this paper. The greater part of this site was, on April 28th, 1848, covered with corn nearly ready for the sickle; the crops appeared very luxuriant, but plentifully sprinkled with the red poppy.

There are few other antiquities now existing in Milo beyond those I have already mentioned, such as the walls, the theatre, and the tombs; but under the volcanic soil that covers the site I have no doubt many things of interest lie hidden. If we could

establish the fact of a volcano existing some two or three centuries after Christ, one might be tempted to say that ancient Melos was once partially buried in ashes. About 1½ mile S.E. of the Scala is a low range of hills, running N.E. and S.W.; the highest peak is called Hiera Petra, which I believe to be 555 feet above the sea-level. There are two or three of the small churches of the country on the slopes of this mount, and nearer to the harbour in this range are some caves facing the S., now used as mandries for goats; there are two windmills near the spot. In one of these caves, to the right as one enters, there is a square hole, which leads to a flight of steps by which we descend to numerous chambers cut in the rock. Many travellers have entered this subterranean abode, and many suggestions have been hazarded as to their former use. The inhabitants give the place the name of Grotto of Zopiro, or Grotto of Zopyrus. Capt. Graves has a plan of these chambers; they certainly were never intended for places of sepulture. I have unfortunately mislaid the notes I made when within, but I have a pencil sketch of the ground-plan. The tradition of the place is, that this in ancient times was a retreat for the Meliots when pressed by their enemies.

About ¾ of a mile N.N.W. of Mount Kalamo, near a small Greek church, are the foundations of an Hellenic square tower. Mr. Wilkinson, late of the Volage, took a plan of it, as also of the Grotto of Zopyrus. I could find nothing like ancient remains among the ruins of the town on the plain except some blocks of marble and pieces of entablature, in all probability removed for building purposes from the site of the ancient city near Castro. The round and square Hellenic towers found in the different isles of the Grecian Archipelago have engaged the attention of many observers.

Lord Browne informs me by letter that the millstones are quarried at a place called Rama—properly Rema—that is already mentioned in his remarks. "On the E. coast is a deep valley, with precipitous hills or cliffs on each side; the stone of the cliffs is pink and white, and of the very same description as those quarried beneath. The quarries are in the bottom of the valley or ravine, and are merely underground passages made by the abstraction of the stone. They are probably not more than 20 or 30 feet below the surface, but it is difficult to say.

"There are about twenty holes or entrances made a little on one side of the lowest part of the ravine, to avoid the water running into them;* I think the quarries all communicate with one another. During a great part of the winter men cannot work

* The twenty holes, or entrances, are not quite at the bottom of the ravine; otherwise the water would more easily run in.

from there being water in them. The ground in the mines is of a very crumbling nature, and frequently, when the men are mining and open out a fresh piece, the stones and soil keep falling at intervals, sometimes for a whole day and night; when that is the case, those parts of the mine are left for the time, and on clearing away the loose mass of stones and earth there remains a considerable space or chamber. The mines extend from ¼ to ½ a mile under ground, and, although partially under the hills, the direction of them lies chiefly along the ravine; this is probably for the convenience of light and air, as well as taking the stones out. The stones are small and irregular; I forget how many are put into one millstone, but I know a great many are joined together by cement; they are got out of the mines by crowbars and purchases, as the land is naturally of too crumbling a nature to render blasting necessary." The Government derives a considerable revenue from their exportation.

The springs most worthy of notice are on the sea-coast, within the harbour, and about 2 miles S.E. of the Scala. Some of these springs rise up close to the sea margin. The rocks around are of a reddish ferruginous colour. The last time I visited them was in company with Mr. R. W. Hay. We dug holes in the shingle, and placed the thermometer in the spring: the mercury rose to 126°; the temperature of the atmosphere was 68°; the day of the month April 28th; the temperature of sea-water 94°, the cause of which was the innumerable hot springs bubbling up from the bottom. I went in, and at the depth of 4½ feet I could not bear my foot over the spring, so hot were they, gushing up with great force. In fact, in one spot I should think that the water at the bottom was of a much higher temperature than that we tried on the beach, when the thermometer was 126°. The rocks are red, as in the Bay of Exhalations at Santorin, in Neo Kaimene, showing the quantity of iron contained in these springs. The French Expedition gives the temperature 55° of Centigrade. Lieut. Strickland, R.N., gives the temperature of these springs on Nov. 27, 1844, 108°, and that of the sea-water 68°; atmosphere 62°. These springs are salt and acrid. At a short distance inland there are several cold springs in the sand, bubbling up in little round holes; they are also salt. On the S. side of the low range of hills, near and at a very short distance from these little bubbling rills in the sands, is a cavern, which we entered, the country people bringing us lights. At its further end we were conducted to a pool of water some 4 feet in depth, which is salt: the temperature of the water was 84°; the air in the cavern 74°; external air 68°. Lieut. Strickland, Nov. 27th, 1844, found the temperature of the cave 85°; temperature of the water 82° (which is curious); the external air 63°. The farther we advanced towards

the extremity the more sulphureous was the smell. After my bath in the sea I was not tempted to try a second, wonderful as the properties may be which are attributed to these waters. I have no doubt that they are very great, particularly in cutaneous disorders. Olivier and Tournefort both mention these baths or springs, which are known by the name of Loutra.

I once visited and bathed in the hot springs at Thermopylæ, which I should think were similar to those at Loutra in Milo, and are also used by people suffering under cutaneous disorders.

Tournefort tells a story of a gentleman of Cephalonia who was cured of an inveterate itch in twenty-five days by bathing in the Milo baths.

Hippocrates cites the case of a patient who was also cured of the same disorder by the same waters.

I collected the waters of these several spots, and took them to Malta to be analysed; but the sum demanded for that process deterred me from making the experiment.

At the small port of Petriki, on the side of the port opposite to Scala, and bearing about S.S.W. from it, there is a ravine, down which fresh water runs until a late period in the spring; in the summer it is perfectly dry. In the large bay or lagoon to the westward of Petriki, something more than 1 mile distant, there is a spring of fresh water, which becomes nearly dry in summer. The inhabitants seem to rely entirely on their tanks for water. They are cleaned out at the beginning of each winter, and it is wonderful what a quantity of sediment is taken from them, probably caused by the rains washing the mud from the tops of the houses, every dwelling having a clay roof. On the site of the ancient city we found several ancient cisterns and tanks with pure good water. One of them, which is capable of containing many thousand gallons, is cased with a beautiful cement, and is situated close to a large fragment of a terrace wall of Cyclopean masonry, about 500 feet N.N.E. of the hill Apollo. Among the ruins of Paleo Khori on the plain there are many tanks and wells; and there are many springs around the adjacent marsh, but they are unfit for the use of man.

Due S. " true" of Scala is a small bay open to the N.E., at the head of which to the S.W. is a small pier under water for the protection of the country boats when the wind is from the N. Also at the head of this bay is a small lagoon of salt water, into the S.W. end of which runs a strong spring of excellent fresh water. In winter no boat can approach it. Formerly there was a small monastery near the spot, the ruins of which still exist. There is a small garden with a few fig-trees, and also one of the small Greek churches on the N. side of the lagoon.

Lord Browne can give me no information as regards the springs

mentioned by Tournefort, and by the French Expédition Scientifique, vol. ii. p. 298. Both accounts exactly agree as to distance and locality, 6 miles N. of the "ancienne ville" between St. Constantine and Kastro. The latter account even gives the temperature 28° and 29° Centigrade. Both agree that they are on the sea-shore and under steep cliffs. Now, 6 miles in a direction N. of "l'ancienne ville" takes us well out to sea, even to the N. of the Akrathes rocks. If we could know St. Constantine, which I do not, their position might be ascertained.

I can form no idea where the purging fountain is of Tournefort, 6 miles N. of the ancient town, and between Kastro and St. Constantine. It appears to have been on the sea-shore under steep cliffs. I suspect he must mean the springs on the shore just alluded to.

Pliny mentions the alum of Milo (xxxv. 15). He says, "After that of Egypt cometh that of Melos, of two different kinds, either pure and clear or else thick and gross; the former, if good, is bright like water and white as milk, not offensive to the hands that cut it, yet participating in some sort of a fiery heat; the juice of a pomegranate turneth it black; it allayeth the rank smell of the armholes. Of alum that is hard and thick and massive there is one kind that the Greeks call Schistos, and the nature thereof is to cleave along into certain filaments or threads like hairs, and of a greyish colour, which is the reason that some have given it the name of Trichitis. However it be named, it cometh of a certain marquesit stone, whereupon they called it Chalchitis, so that it may be called a very sweat of the said stone; but would you know the very best and principal alum of all soils, it is that of Melos, and therefore called Melinum." The French Expedition to the Morea, in its visit to Milo, speaking of the alum, says,—"L'on peut très bien suivre les roches schisteuses de la partie sud, où elles sont encore intactes, jusqu'à dans la partie nord, où elles ont été altérées à point d'être devenues méconnaissables sans cette circonstance, et reconnaître que ces tufs si légers et si friables, au milieu desquels s'exploitait l'alum de plume, ne sont autre chose que les schistes argileuses et autres roches anciennes altérées par l'action des feux souterrains agissant encore aujourd'hui."

The only alum-mine that I could hear of in the island lies about half a mile E.N.E. of Paleo Khori, or the ruined mediæval city on the plain, on the side of a low range of hills. Near it is a small church on a hillock, called Hagios Giorgios. Mr. Hay and myself descended into the pit April the 28th, having first taken off our coats. The descent was steep and the heat great in comparison with the external air, the thermometer showing 96°. We were at first nearly overpowered by the strong sulphureous vapour rising up from the bottom of the cavern, and in a short time were

drenched with perspiration. From the mouth to the bottom of the lowest chamber the distance may be about 150 feet, and the descent about an angle of 46°; in places the lowness rendered it necessary to go on hands and knees. We were supplied with candles to enable us to explore the cavern. We passed into two or three chambers of no great size, which have been worked at different times. These chambers are very beautiful, sparkling as it were with gems, and in places covered with a sort of silver frosted work. Striking the sides of the cave with hammers, we broke off beautiful specimens of spiculæ like crystals: in other places it consisted of fine greyish threads, like asbestos. The spiculæ I should imagine were of pure alum: if one wishes for a good specimen it is better to break it with a sharp-pointed instrument. I tried to preserve some of the feathered alum, but it soon lost its beauty after being transferred to the ship. Quartz, in different stages, is mixed with the soil at the entrance. Tournefort and Olivier both give a fair account of the alum of Milo. Dioscorides (lib. v. c. 123) spoke of it, and was of opinion that it hindered women from conceiving.

Mount Kalamo is situated on the S. coast, near the Cape of the same name, and is 505 feet high. It may, in some measure, be called the Solfâtre of Milo. Kastro bears N.N.W. about 6 miles from this remarkable spot, and shows out boldly above all the land in its neighbourhood. From the alum-mine to the summit of Kalamo is one hour. Near the top this mountain has a very remarkable patch of ragged, reddish, ferruginous rocks, where we found many fissures, with smoke issuing from them, accompanied by strong sulphureous smells, and much sulphur spread about. This sulphur-mine of Milo appears like a semi-active volcano; the peak of Elias bears about W.N.W. by compass from the peak of Kalamo, distant something less than 6 miles. Lord Browne informs me that sulphur is to be found on the summits of other mountains to the N. of Kalamo: this range of mountains is in the eastern half of Milo, running in a W.N.W. and E.S.E. direction; the vine is cultivated on their slopes.

According to the French account (ii. p. 291), Vauquelin made the analysis of the earth on the summit: he found that in 100 parts there were "66 de silice, 20 d'alumine, 10 oxide de fer, 4 de chaux, 2 de muriate de soude, 6 d'eau, et 1 de perte."

There was not the same violent action going on during our visit to Kalamo as in the time of Tournefort, for he describes flames issuing from the rocks on the coast. Olivier also seems to have been in danger of sinking into the soft burning earth from approaching too near the pretended crater of Kalamo. Our party encountered none of these dangers, and saw no flames,

neither in the face of the rocks, nor on the coast, nor on the summit. Certainly, when sticks were thrust in, they became too hot to be touched by the hand. I have known the same occur on many other parts of the island; for instance, in a ravine near some caves 1½ mile E. of the Scala.

The salt-pans of Milo are at the bottom of the bay or harbour. I never heard of any other. They are near the most vile and stinking marsh I ever saw or smelt, the contiguity of which to the town on the plain serves as a strong reason for its present depopulated state.

The gypsum I have mentioned, but I know not whether it is superior or inferior to that found near Paris. I have seen large quantities of it at the Piræus of Athens, where, as already observed, they use it to clear their wines.

On the W. side of Paleo Khori Bay, and near Mount Kalamo or Sulphur Peak, there are remains of a modern or middle-age town. It is built on a number of small but very steep hills, and was probably a work of the Venetians. No good water is found among the ruined houses or in the environs.

At the present day "Kastro," or, as it is called by English seamen, the "Crow's Nest" (and by the French "Sifours," in consequence of its resemblance to a town of that name near Toulon), is the principal place of residence of the Meliots. The inhabitants of most islands in the Greek Archipelago, as in Syra, Zea, Skyros, and other places, selected these inaccessible spots for their dwellings in order to protect themselves from their enemies and the hordes of pirates who, from time immemorial, have scoured the Ægean.

Kastro is a capital specimen of a village built round a pinnacle; the height is 907 feet above the sea-level. At a distance it has a very pretty, romantic appearance, and from its summit the greater part of the island may be seen. On a clear day there is a very extensive view seawards, which embraces the entrance to the Archipelago, towards which many anxious glances are directed by the Meliot pilots, in hopes of getting employment in their calling. The inhabitants of Kastro, particularly the men, more or less are acquainted with many of the European languages, especially French, Italian, and English, which arises from their serving as pilots on board vessels of those nations. Notwithstanding their thus mixing with civilized people, a more filthy place than this town I never recollect seeing. It is well for them that they live on an elevated spot, and that the winter rains wash down all the filth collected during the summer, as it might share the fate of Paleo Khori in the plain, and become depopulated.

Geologists call this cone trachytic, and I suppose that it was forced up by volcanic agency during one of the many convulsions

to which Milo has evidently been subject. The colour is a brownish-black: close under it, to the E. and the W., are a few scattered houses, which may be called Cato Kastro. There are also, at a short distance, the villages of Tria Vasala and Tripiti; the first is ¾ of a mile S.E. of Kastro, and the latter about the same distance more to the S., and close to the ruins of the ancient city.

The Scala I have already mentioned as being peopled by Sfakians, who seem to be unwelcome guests and the terror of the whole isle; their robust appearance, bold air, and independent manner sufficiently betoken the hardy mountaineer. The population of Milo amounts to more than 2000 souls. The captain of the port resides at the Scala, and the Greek flag waves over a wretched building there dignified by the name of custom-house. The houses of Kastro are built principally of the volcanic stone of the island, of which the walls of the ancient city also are built. Tournefort says, "it is something like pumice, but hard, blackish, light of weight, not susceptible of impressions of the air, and very fit for sharpening all kinds of iron tackle."

Paleo Khori, as it is called, is now in ruins. A few miserable inhabitants still eke out a wretched existence amongst its remains; they told me there were about forty-five families. Nothing can appear more desolate than fever-stricken Paleo Khori, looking at it from the adjacent hills. Fallen walls and houses, roofless churches, and a few melancholy palms meet the eye, whilst a sort of mirage, the exhalation of the neighbouring marsh, hovers over it. Olivier describes it truly (vol. ii. chap. 9, p. 203): "On entering it," he says, "we were struck at seeing houses on all sides fallen in, men bloated, consumptive faces, ambulating corpses: everywhere the image of destruction and death offered itself to our eyes. Scarcely forty families drag on their unfortunate existence in a town which still reckoned 5000 inhabitants within its walls at the beginning of the last century." I found but one church that is still used as a place of worship; it is dedicated to the Panaghia, and near it in an open space are some blocks of marble, having upon them partially effaced inscriptions in Latin and Greek; these fragments must have been carried thither from the ancient site for building purposes. I entered one ruined church, the floor of which had been torn up to despoil the dead, and wrecks of coffins, human bones, grave rags, and other remains were scattered around and piled against the altar. A wretched woman with her offspring crossed my path, who from the ulcerated state of her breasts was unable to nourish her infant. She begged loudly for medical assistance, which I was unable to afford her. I was glad to leave Paleo Khori behind, and gain the open fields.

My friend Col. MacAdam says, "Low down the air of Milo is unwholesome, and from cavernous places sulphuretted hydrogen and muriatic acid gases, mixed with watery vapour, are still emitted; sulphur is sublimated; the water, trickling and dripping, contains sulphate and muriate of soda. Obsidian may be had in shiploads: fresh water is scarce. The white trachyte conglomerate of Milo, as in Hungary, has yielded gold, precious opal, and wood opal."

Milo contains 21,000 stremata of land, of which 10,000 are cultivated. Lord Browne ascertained the produce of the island for the year 1848, which he gives as follows:—

Barley . .	40,000 kilo.
Wheat . .	20,000 kilo.

A kilo of good wheat weighs about 22 okes; barley, 16 okes; oats, 13 to 14 okes.

Cotton . .	1,500 cantars (cantar, 44 okes).
Wine . . .	1,500 barrels (barrel, 52 okes).
Gypsum . .	1,500 cantars.
Salt . . .	150,000 okes.

			Drach.	lepta.		Drach.	lepta.
Millstones .	1,500	at	5	50	or	7	50
,, .	3,000	at	2	80	or	3	80
,, .	9,000	at	1	70	or	2	20
,, .	20,000	at	0	80	or	1	10
Handstones .	200	at	9	0	or	12	0

The handstones are dearer, on account of their greater size. If a Greek subject buys millstones he pays according to the first or lesser column; if a Turk or foreigner, according to the second or greater.

Exports:—

		Drach.	lepta.	
Barley . .	6,000 kilo, at about	3	20	the kilo.
Cotton . .	300 cantars, at	16	0	the cantar.
Gypsum . .	1,500 cantars, at	5	0	the cantar.
Salt . . .	150,000 okes, at	0	8	the oke.

The salt at 8 leptas the oke gives the total value of that article at about 2000 Mexican dollars, worth 6 drachmæ the dollar.

All the millstones and handstones are exported; for the quantity consumed on the island, although there are so many mills, is scarcely worth mentioning, as they last so long a time. The government received for the stones 60,000 drachmæ. The largest single millstone is about half a moderate-sized man's body, except those marked handstones. They adopt the plan of cementing a number of stones together to make one grinding-stone, which are got from the quarry by task-work, the labourer receiving so much per cent. on the value quarried.

The salt-pans are let by the government to a contractor, who

makes what he can out of them. These and the quarries were formerly the property of the island; but Otho and his government have now taken them in hand, and farm them pretty severely. Alum has not been exported for many years.

The cotton grown on Milo is the plant, not the tree, "Gossypium arboreum." Colonel M'Adam says, that under better auspices he thinks the southern half of the isle may be made more productive. He mentions, among other plants there, the Rocella tinctoria, and the Ornithogalum, belonging to the natural order of Asphodeleæ. The latter is still sold in Smyrna and other places. It is what is known in our gardens as the Star of Bethlehem; in the Levant as doves' dung, its root being like it in shape. It was known in Scripture by that name; and at the siege of Samaria (2 Kings, chap. vi.), "an ass's head sold for fourscore pieces of silver, and a fourth part of a cab of doves' dung for five pieces of silver." It derives its name from ornith (ὄρνις, ὄρνιθος), a bird, and γάλα, milk. One species of it has a bulb nearly as big as the human head. I have not met with any trees approaching to the size of timber. There are some few olive and other fruit-trees, and many shrubs.

The temperature of the island is hotter, perhaps, than the greater part of the archipelago. The winters are mild and wet. Lord Browne says that snow is seldom seen even on the peak of Elias, although in the winter of 1848-49 it lay for twelve hours close to the sea. In summer the prevailing winds are northerly. January and February are bad blowing months, with rain, the wind generally from the N., with intervals of westerly and southerly gales. The calmest months of the year are those of June and October. In the spring, after February till the middle of May, southerly winds decidedly prevail.

The question has often been asked, what is the nature of the wild animals on Anti-Milo. Are they goats? are they the ibex? or are they hybrids, partaking of goat and ibex? Lieut. Tower, of the 'Beacon,' shot one or two specimens, and Lord Browne tells me that they were positively the same as the ibex of Crete, some of which were on board the 'Beacon' when the Anti-Milo specimens were procured. That a hybrid may partake very much of its male, and little of its female parent, I believe; for last year, when in Crete, at a place called Gharazo, a female goat was brought to me, with three kids half grown: they were half ibex, and partook very little of the mother. The owner told me that the goat had strayed to the higher parts of Ida, and was recaptured after a time, large with young; also, that around Gharazo the ibex is frequently seen.

There is a very poisonous adder, or snake, in Milo, which, although common, I was unable to get a sight of. It frequently

attacks animals, especially dogs. I saw two of these animals suffer from its bite, and in both cases the poison became infused so powerfully and rapidly that the dogs fell down as if they were shot. However, both recovered. I should be inclined to think that it must be like the "Κουφη," "Couphi," or deaf adder, of Cyprus, one of which was brought on board the 'Volage' at Larnaca, the bite of which is terrible, and the poison operates as quickly as that of the adder of Milo, though I have never heard of death occurring, but frequently of amputation being necessary to preserve life. The head of the couphi is cordiform, and the neck much smaller than the head and body: the tail is short and cylindrical; the upper jaw is armed with two teeth, which are very long in proportion to the rest: the colour is ashy grey, more or less dark, with a black zigzag streak along the back, and a range of blackish spots on each side. The scales of the belly are slate-coloured. One specimen brought to Larnaca was 3 feet long and 4 inches in circumference: the one I saw was about that size. Though the inhabitants call it the deaf adder, the handles of their sickles are loaded with bells wherewith to drive it away as they cut the corn. The tinkling of these bells has an odd sound while the reapers are at work: they also wear high boots to protect their legs from its bite.

The earth of Kimolo is still used, as in ancient times, for the cleansing of linen. Pliny mentions it as being used for that purpose; and also Theophrastus and Dioscorides. The 'French Expedition' (ii. p. 303) has given an account of it:—"Cette terre, abondamment répandue dans l'île, est une argile d'un blanc bleuâtre, onctueuse et molle, résultant de l'altération d'une argile très probablement un peu marneuse; par les mêmes actions chimiques qui ont modifié le sol de Cimolis, comme celui de Milo, où cette terre se rencontre également."

The number of archipelago pilots in Milo may amount to about 146; but their trade has been greatly spoiled by the circulation of the charts constructed during the last thirty years by the different officers employed in the Levant for that purpose by the British Government; and in the course of another three years a complete survey of that most interesting region will probably be ready for the use of all nations. It has been a work of gigantic proportions, and has required the earnest zeal of many men of talent.

None but those who have borne the toil of many successive months, exposed in boats or tents to the rays of a scorching sun, merciless rains, and strong gales, can justly estimate the dangers of a surveyor's life; and, though last not least, the pestilential fevers of the Levant, which have laid many a poor fellow in his grave, or stricken him with ague for the rest of his days. Let the traveller go where he may, amongst the isles of Greece, or along

the shores of the Peloponnesus, Attica, Bœotia, Macedonia, Eubœa, Ionia, Lycia, Cilicia, &c., and many mournful epitaphs to the memory of the departed will remind him that there repose the remains of men cut short in the prime of their existence, who devoted their lives to science and the benefit of their fellow men. I need scarcely add that the present energetic Hydrographer to the Admiralty himself was a sufferer in the same cause, having been severely wounded on the coast of Karamania.

The inhabitants of Milo are, I think, a fairer and a handsomer race than those of the other Grecian isles. I have seen some women who possess great personal charms; but they are much disfigured by the strange style of their costume. On a festal day the wife of our consul was dressed in a jacket of crimson velvet, lined with furs, and reaching to the hip; a white skirt, reaching nearly to the ankle; outside of which another skirt, reaching nearly to the knee; her feet clothed in stockings. In the old town on the plain the women wear the skirt only long enough to reach to the knees, and below that the leg is covered with a thick felt gaiter; over the stocking, which is fastened under the feet by a material of the same stuff, they wear a red or black shoe; a white jacket, with wide sleeves; and head-dress of the same stuff, tastefully wound round the head. This latter dress is something similar to that used in Tournefort's time.

I have made many inquiries why the Meliots are so fair. The old navigators tell us that in their times freebooters and Venetians constantly put into Milo and the Kimolo roads to carouse and spend their money. Tournefort describes the women of Argentiera as "arrant coquettes." As the harbour of Milo has been from time immemorial a place of shelter and rendezvous for all European vessels, I cannot help thinking that their crews left a little of their breed behind, as well as their money. Lord Browne was informed by the pilots that such was formerly the case; but whatever may have been the immorality of the Melian women in past times, they are said, at present, to reserve their favours for their own countrymen, or those who are skilled in the Greek tongue.

The wine of Milo, considering that it grows upon a volcanic soil, is not near so good as that of Santorin; it is sweet and mawkish; I never could drink it; whereas that of Santorin is excellent. In Milo they leave the bunches of grapes for several days in the sun after cutting, which has the effect of a partial fermentation, and adds greatly to the strength of the wine, though not to its quality.

In all the islands the education of children seems to be strictly attended to; and Milo is not behind its neighbours in that respect, having a very fair school.

Fossils may be found in great numbers on the northern shore of

Milo, in a soil of tertiary formation. In fact, I have seen them all over the neck of land between Scala and the large bay which is bounded on the E. by Cape Pollonia, and on the W. by Bounda Isla, or farther to the W. by Cape Spilos. Lieutenant Mansell made a large collection of beautiful specimens from that locality. The French in their researches have also added to our stock of knowledge on the fossils of Milo, (Vol. ii. p. 289).

Professor M'Coy, "who visited Milo," asserts that all the fossil shells found in this group are of existing species, which shows that the elevation must have taken place at a comparatively recent date.

The port of Milo has no greater depth than 31 fathoms; that is, the actual port where vessels anchor. Within a line drawn from Scala to the S.W., or across to the little cove at Petrichia, from thence to the N.W. and that part between Cape Kalamaria and the opposite shore, the water deepens to 52 fathoms; and from thence to between Capes Vani and Chidathi to 90 fathoms. It would be hazardous to say that the inner basin, or, in fact, any part, was the crater of an extinct volcano, much as the nature of the surrounding shores may lead one to that belief; but if it should be so, as to its having a chasm on its N.W. side, that might be accounted for by the crust of the cone having been too weak to keep out the pressure of the waters of the Ægean Sea.

Sir Charles Lyell observes that, in the case of the great crater at Santorin, the existence of one, and one only, deep and narrow chasm communicating with a central cavity is wholly unexplained by the popular theory of "craters of elevation."

Lord John Browne, when engaged in the coast line of this group, observed no signs of flames or smoke issuing from the cliffs, neither in Milo, Kimolo, nor Polino. He detected heat and sulphur, as already observed, at the N. end of Vouthia bay, close to Pilo Nisi. He also informs me, that although he tented many times at Cape Apollonia, he never once found any ruins that might lead to the supposition that a temple ever stood there. Perhaps an earthquake, or some other convulsion, may have thrown down a part of that coast, and separated Kaloyeros isle from the main.

We saw no inscription of great antiquity in Milo. That the city of ancient Melos was inhabited perhaps some three or four centuries after the Christian era is not improbable, if we may judge from the nature of the inscriptions in the tombs, and from the fact of our having found a large baptismal font amongst its ruins with a cross upon it, doves on each side, and cypress-trees in bas-relief.

In Cyprus we found many inscriptions of the earliest times,—Cuneiform, Phœnician, of the times of the Macedonian dynasty in Egypt, and of the Middle ages.

Speculations have been made as to the physical character of this very curious group in times antecedent to its assuming its present dislocated form; and it may be conjectured that, like Santorin, Therasia and Aspronisi, Milo, Kimolo, Polino and the different fragments around their coasts, were also once one island. The submarine or subterraneous powers which caused the ruin that we now see were doubtless volcanic; and though history gives no account of the group now under consideration having furnished craters of elevation, still, looking at the scorched shores, the circular harbour, the resemblance to a crater near the road to the Kastro, the quantity of volcanic tufa with obsidian embedded in it around (this tufa is a deep straw-coloured looking substance, and contains scales of white mica, with black specks mixed in it), these substances, together with pumice and pumaceous ashes, give reasonable evidences of an active volcano or volcanoes having existed in this locality in ante-historic times. Further, if we look across the Cretan Sea, we shall find that the western end of the noble island of Crete has been pushed up from its foundations by powerful subterranean forces, which have been in operation in past times. Cape Krio, the Criou-Metopon of the ancients, and the S.W. angle of Crete, has a clearly defined sea-margin, 37 feet above the present one, as measured by Lieutenant Mansell last year, from whence northwards this ancient line declines to about 20 feet, as measured at Phalasarna, Pondico isle, Grabusa, and Cape Spada, or the Dictynnaeon Promontoreum. Turning E. from thence, towards Rhithymnas, the ancient sea margin gradually declines till it meets the present margin in Suda bay, the difference not being more than 6 feet. This declension is also the same on the S. coast; for as we pass from Cape Krio eastward, as far as the Great Gortynian Plain, there is little perceptible difference in the two levels.